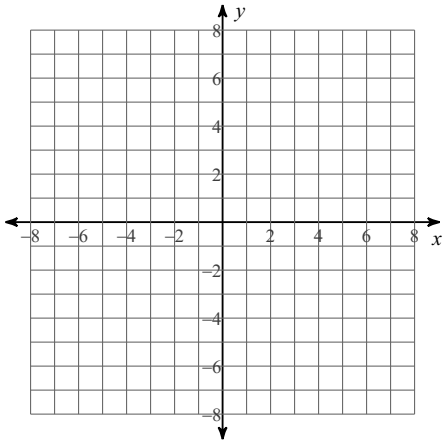
Geometry Honors - Mr. Allen-Black Name_____

Equations of Circles

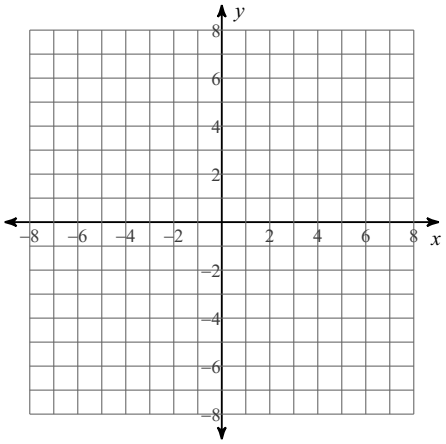
Date_____ Period____

Identify the center and radius of each. Then sketch the graph.

1) $x^2 + y^2 = 25$

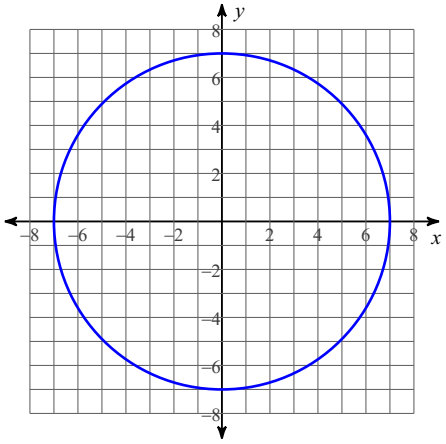


2) $x^2 + y^2 = 36$

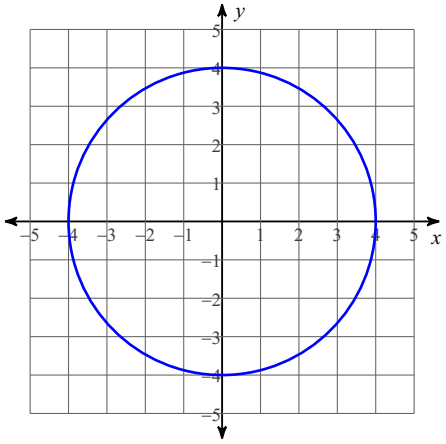


Use the information provided to write the equation of each circle.

3)



4)

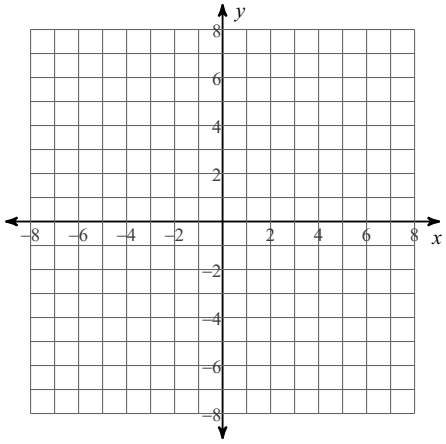


5) Center: $(0, 0)$
Point on Circle: $(-11, -10)$

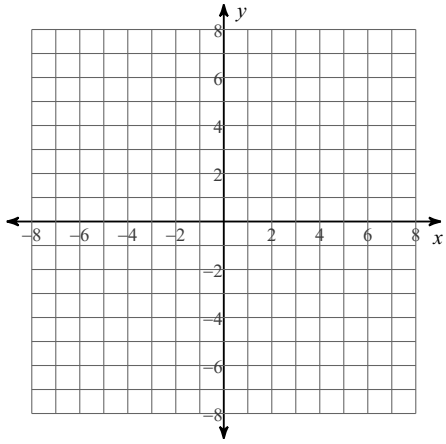
6) Center: $(0, 0)$
Point on Circle: $(8, 10)$

Identify the center and radius of each. Then sketch the graph.

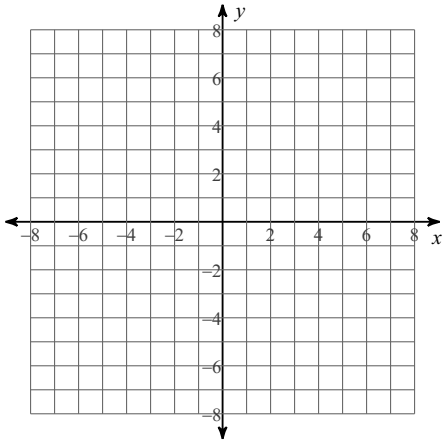
7) $(x+2)^2+(y-2)^2=1$



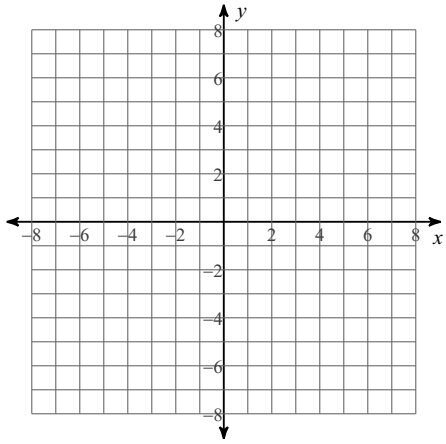
8) $(x+1)^2+y^2=11$



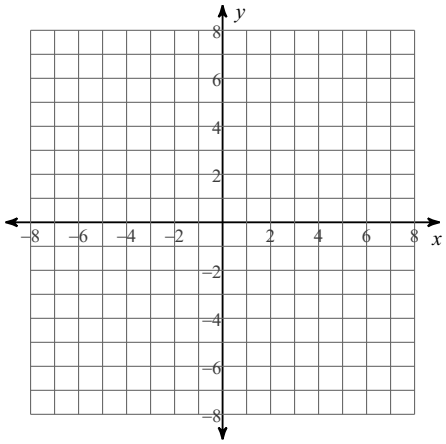
9) $(x-3)^2+(y-2)^2=5$



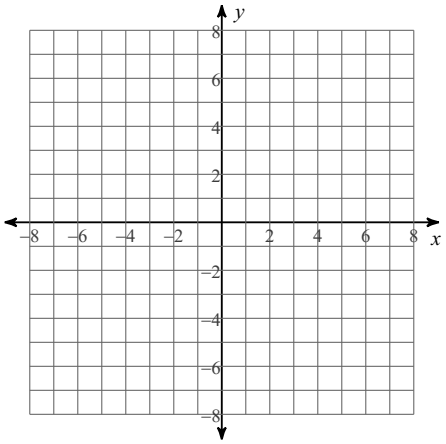
10) $(x-3)^2+(y-1)^2=14$



11) $(x-1)^2+(y+4)^2=4$

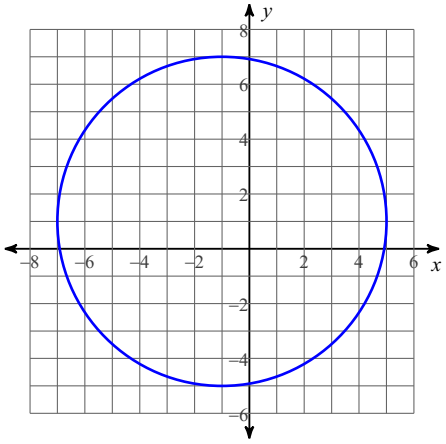


12) $(x+2)^2+(y-1)^2=8$

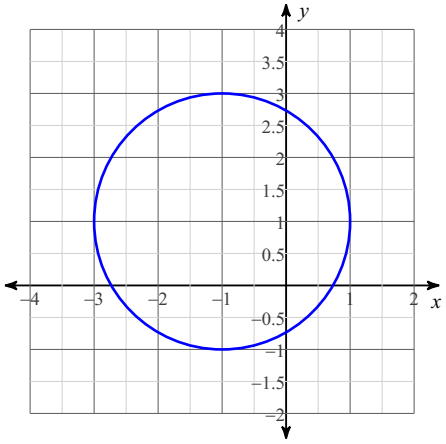


Use the information provided to write the equation of each circle.

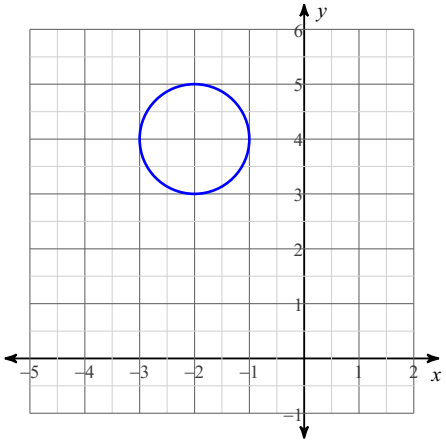
13)



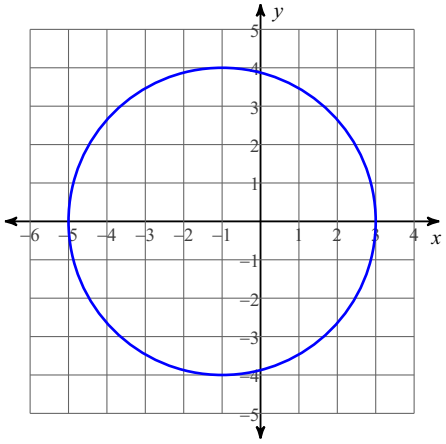
14)



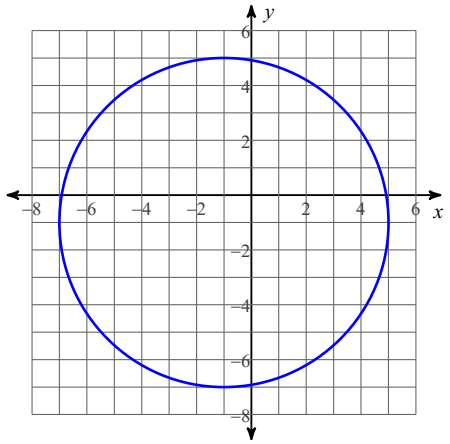
15)



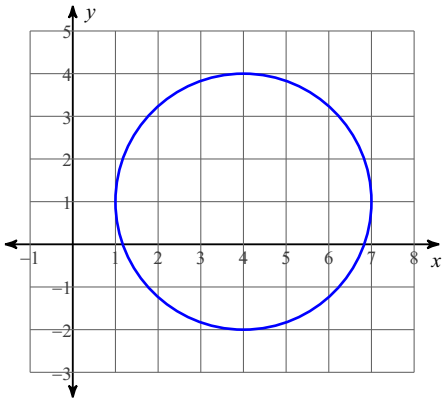
16)



17)



18)



19) Center: $(7, 16)$
Radius: 1

20) Center: $(1, -9)$
Radius: 3

21) Center: $(15, 7)$
Radius: 3

22) Center: $(-7, 1)$
Radius: 6

23) Center: $(-1, 12)$
Radius: 4

24) Center: $(-2, -16)$
Radius: $\sqrt{6}$

25) Center: $(11, -3)$
Point on Circle: $(13, 4)$

26) Center: $(13, 17)$
Point on Circle: $(13, 18)$

27) Center: $(12, 13)$
Point on Circle: $(7, 13)$

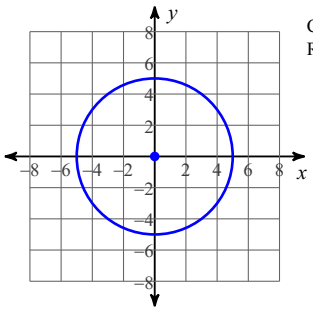
28) Center: $(-10, -11)$
Point on Circle: $(-2, -11)$

29) Center: $(16, 16)$
Point on Circle: $(18, 15)$

30) Center: $(-14, 16)$
Point on Circle: $(-14, 18)$

Answers to Equations of Circles

1)

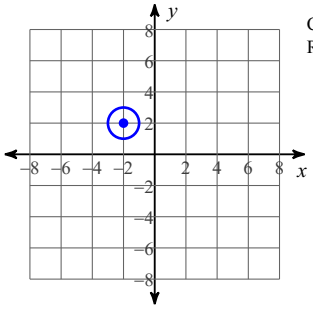


Center: $(0, 0)$
Radius: 5

3) $x^2 + y^2 = 49$

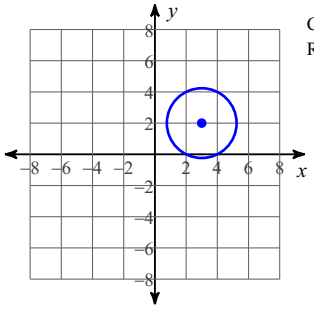
5) $x^2 + y^2 = 221$

7)



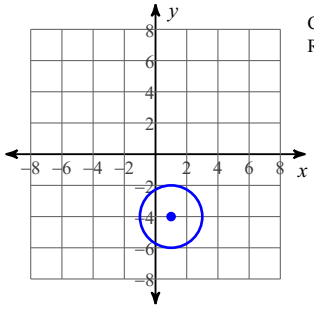
Center: $(-2, 2)$
Radius: 1

9)



Center: $(3, 2)$
Radius: $\sqrt{5}$

11)



Center: $(1, -4)$
Radius: 2

13) $(x + 1)^2 + (y - 1)^2 = 36$

15) $(x + 2)^2 + (y - 4)^2 = 1$

17) $(x + 1)^2 + (y + 1)^2 = 36$

19) $(x - 7)^2 + (y - 16)^2 = 1$

21) $(x - 15)^2 + (y - 7)^2 = 9$

23) $(x + 1)^2 + (y - 12)^2 = 16$

25) $(x - 11)^2 + (y + 3)^2 = 53$

27) $(x - 12)^2 + (y - 13)^2 = 25$

29) $(x - 16)^2 + (y - 16)^2 = 5$